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**Kravtsov**

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(54) **THREE DIMENSIONAL MONITOR AND  
TACTILE SCANNER**

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patent is extended or adjusted under 35  
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(57) **ABSTRACT**

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#### **Related U.S. Application Data**

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(52) **U.S. Cl.** ..... **358/474; 345/427; 382/269**

(58) **Field of Search** ..... 358/474; 345/31,  
345/44, 110, 46, 427; 362/269, 285, 287

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#### **U.S. PATENT DOCUMENTS**

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A three-dimensional display system including a method of operating the display as a tactile scanner. A three dimensional display is formed from a number of moveable rods arranged in a matrix. Each rod has selectively illuminated pixels made from LEDs or similar devices. The rods can be moved independent to position the pixels into position to model a pre-defined object to present a three-dimensional model and overlaying image. The pixels can also be illuminated by an external lighting source such as a laser. Stationary embodiments of the monitor are also disclosed which are formed of a three dimensional grid of LEDs or other light sources which can be selectively illuminated to provide a true three dimensional display.

**3 Claims, 11 Drawing Sheets**

